

Remarks/Arguments

The Office Action mailed October 5, 2004 has been reviewed and carefully considered. The applicant respectfully acknowledges the Examiner's indication of allowable subject matter in the application. In particular claims 8-11 and 13 stand allowed.

By this amendment, claims 1 and 7 have been amended, claims 6 and 12 have been canceled without prejudice. Claims 1-5, 7-11 and 13-15 are pending.

Claim 1 has been objected to for a matter of formality. In particular, applicant has amended claim 1, line 7 to add the recitation of "each" as recommended by the Examiner.

Claims 6 and 12 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 6 and 12 have been canceled without prejudice from the application. As such, this rejection is now moot.

Claims 1-7, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ngo et al. in view of Bauer.

The Examiner has cited Ngo et al. for disclosing, *inter alia*, "a switch matrix (102/202) for transmitting signals from at least one of said input pins to at least one of said output pin." Applicant's claim 1 recites, *inter alia*, a plurality of switches, each possessing three poles, and wherein wires connect the plurality of input pins and plurality of output pins to two of the three poles of the switches. The third pole of the plurality of switches functions as both an input and/or an output depending on the operative mode of the switch. The switch matrix 102/202 of Ngo et al. does not disclose or suggest the use of a switch where the third pole (or connection node) can be used as both an input or an output point of the circuit. The switch matrix of Ngo et al. simply operates to connect an input to any one of the outputs and cannot change the number of inputs or output points of connection to the circuit. Ngo et al. neither describes nor suggests the use of a three pole switch as claimed in claim 1.

Bauer discloses a switch matrix encoding interface. Bauer teaches a switch matrix encoding system that provides lines capable of functioning as inputs and outputs, in order to strobe the switch matrix or admit a signal. However, the disclosure of Bauer specifically teaches the use of a single pole, single throw switch with each key (col. 1, lines 67-68). As such, the combination of Ngo et al. with Bauer fails to disclose or suggest, and actually teaches away from, the multi-pole switch is feature of applicant's claimed invention.

Dependent claims 2-7 are believed allowable for at least the reasons cited above and their dependency on independent claim 1. Withdrawal of the rejection and allowance on the merits is respectfully requested.

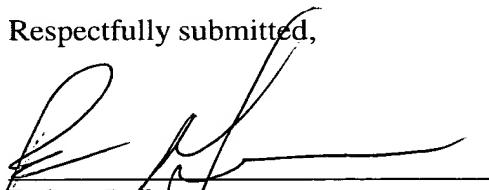
Applicant's claim 14 recites, *inter alia*, a switching apparatus that is connected to an input pin and an output pin such that the third pole is a common pole that, depending on the position of the switching apparatus, causes the third pole to be an input or an output to the circuit. As discussed above, neither Ngo et al. nor Bauer taken singly or in combination disclose or suggest this feature of applicant's claimed invention. Withdrawal of the rejection is respectfully requested.

Applicant's claim 15 recites, *inter alia*, a cross point matrix adapted to connect one of said input pins to one of said output pins, and at least one switchable connector connected to one of said input pins and output pins via a switch. The matrix 102/202 of Ngo et al. does not function to allow a connection point between an input and output (i.e., the at least one switchable connector of applicant's claimed invention) of the circuit. As discussed above, Bauer teaches away from this concept of applicant's claimed invention. Thus, the combination of the teachings of Ngo et al. with Bauer fails to disclose or suggest the claimed subject matter of applicant's claimed invention in independent claim 15.

In view of the foregoing, Applicants respectfully request that the rejection of the claims set forth in the Office Action of October 12, 2004 be withdrawn, that pending claims 1-7, 8-11 and 13-15 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's Deposit Account No. 07-0832.

Respectfully submitted,

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I hereby certify that this amendment is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on:

11-3-04
Date

Lori Klewin
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